

of the Synthetic Fuels
declined, he says, be-
cause he thought Ronald Reagan would be
elected and President-elect Reagan ap-
pointed him to a transition committee. But
he says he doesn't need to arm-twist to get
contracts. "The politicians can't touch me,"
he exclaims.

When it comes to profiting from changes
in government policy, few businessmen can
touch him, either. In 1965, when the govern-
ment was exploring commercial uses for nu-
clear bombs, EG&G planned to stimulate
natural gas production in the West through
underground nuclear detonations that would
release trapped gas. The project excited
Wall Street, and by 1967, EG&G's stock
price mushroomed to 79 times earnings. Ea-
ger to diversify out of government work,
Mr. O'Keefe traded EG&G shares for sev-
eral scientific-instrument and mechanical
parts companies.

The citizens of Colorado objected to plans
to explode 1,000 nuclear bombs beneath their
state, though, and the project collapsed in
1974 as a result of a referendum. But by
then, EG&G's commercial operations had
become among its most profitable.

Now, EG&G is awaiting the government's
plans to build space-based weapons systems
and a manned space station. Both would use
nuclear-power sources, Mr. Kucharski be-
lieves, and would require the kind of safety
and testing programs in which EG&G ex-
cels.

EG&G competes commercially only in
small markets that it can dominate. About
40% of its sales now come from technical
services and such products as precision
fans, optical components and radiation de-
tectors that don't have enough sales poten-
tial to attract many competitors. EG&G
says it is either the market-share leader or
performance leader in about 80% of these
technological markets, which have average
world-wide sales of less than \$25 million.

Its research work, meanwhile, ranges
from one laboratory in San Antonio, Texas,
that tests automobiles for pollution and
safety, to another in Worcester, Mass., that
evaluates anticancer drugs and studies the
effects of marijuana.

Avoiding Risks

EG&G avoids financial risks, perhaps be-
cause it deals in deadly weapons, perhaps
because of the conservative outlook of 64-
year-old Mr. O'Keefe and his successor as
chief executive, Dean W. Freed. Personally,
the men are opposites, and they concede
that they aren't close friends. Chubby, bald-
ing, an indifferent dresser, Mr. O'Keefe en-
joys regaling politicians. Tall, elegant, nat-
tily tailored, Mr. Freed stiffly proclaims
that his hobby is "joining organizations in
a leadership position." But both men look
for sure bets before they invest EG&G
money.

The company's "wish list" of 90 acquisi-
tion prospects is kept in a black loose-leaf
notebook. Reaching for it, David J. Beau-
bien, senior vice president, comments:
"You wouldn't know these companies even
if I told you their names."

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Other Defense Work

It Also Has Civilian Products
That Rule Small Roosts;
Its Earnings Keep Rising
But Who Ever Heard of It?

By BOB DAVIS

Staff Reporter of THE WALL STREET JOURNAL

NEVADA TEST SITE—Deep in the Ne-
vada desert, the United States is preparing
for a Soviet nuclear attack in space. EG&G
Inc. is doing the work.

EG&G miners are burrowing a mile deep
into a volcanic-rock mesa to lay a huge steel
pipe. Next spring, they will encase the pipe
in concrete and suck it free of air to resem-
ble the vacuum of outer space. Then, EG&G
technicians will fire a nuclear weapon in-
side, obliterating part of the tunnel and bat-
tering delicate sensors with radiation. From
this test, weapons scientists will try to gauge
how well U.S. satellites and space-bound
missiles would withstand a nuclear blast.

EG&G is the bomb company. Since the
nuclear era began, EG&G has helped man-
age all but eight of the approximately 745
announced U.S. nuclear detonations. It fired
the first U.S. hydrogen bomb, pulverizing a
small Pacific island called Elugelab. It col-
lected data on a nuclear rocket-burst that
turned the sky green over Johnston atoll,
also in the Pacific.

Current Work

These days, EG&G is testing warheads
for a new generation of missiles. It has built
experimental silos for the MX. It researches
ways to track nuclear submarines. It builds
components for nuclear-weapons systems.
And whether the U.S. keeps pace with or
falls behind the Soviet Union in the nuclear
arms race depends, in part, on EG&G.

In addition, the company has sizable
commercial operations. Its 122 specialized
commercial product lines and services in-
clude businesses ranging from making am-
plifiers used in research projects to testing
auto emissions and possible cures for can-
cer.

EG&G also makes money—consistently.
Earnings have increased every year since
1970, even during the 1974-75 recession, when
many government contractors suffered.
Last year, net income reached a record
\$16.6 million on sales of \$904.2 million.

Even so, EG&G is the most anonymous
of companies because of its super-secret re-
search. Its headquarters is tucked away, un-
marked by a sign, in a squat office building
in Wellesley, Mass. And John M. Kucharski,
a senior vice president, says that until re-
cently, even his kids couldn't figure out what
he did for a living.

Understanding the company requires
an effort beyond many securities analysts
because its government work is sometimes
classified and its commercial work is frac-
tured into tiny markets. "Analysts clutch
their throats and run from the room when
you mention EG&G," says Nancy B. Tooke,
a vice president at E.F. Hutton & Co.

Even many antinuclear activists say they
never heard of it. Jean Holladay, a New
Mass., grandmother, spent 2½ months in
jail for pouring blood on documents inside a
factory that makes MX missile parts. But
although EG&G is headquartered just a few
miles from her home, she asks: "Are they
in Massachusetts?"

EG&G got off the starting blocks in the
nuclear race when one of its founders, Har-
old E. Edgerton, designed circuitry that was
adapted for the atomic bomb that flattened
Nagasaki. After the war, the government
asked Herbert E. Grier, who together with
Mr. Edgerton and Kenneth J. Germeshausen
had formed a company around their initials,
to fire three atomic bombs at the En-
iwetok atoll in the Pacific.

None of the founders remains active in
the company, but EG&G's first employee,
Bernard J. O'Keefe, now is chairman. As a
young Navy engineer, Mr. O'Keefe hand-
wired parts of the Nagasaki bomb. Since
working for EG&G, he has been involved in
about 200 nuclear-weapons tests, often an-
nouncing the last few seconds of a count-
down. The work has sometimes been dan-
gerous. Once, a hydrogen-bomb explosion in
the Pacific blanketed his bunker with radio-
active fallout, he says.

Weapons Foe

Despite his work, Mr. O'Keefe says he
shares the concerns of antinuclear protest-
ers. In his book, "Nuclear Hostages," he
calls the United States and the Soviet Union
"superpawns" to the arms race and opposes
a raft of weapons systems—the neutron
bomb, the MX missile, nuclear missiles for
Europe—that his company helped develop.
But Mr. O'Keefe says he won't lobby his
friends in the Pentagon or on Capitol Hill to
stop work on nuclear weapons.

"I'm in the system," he declares. "I'm a
card-carrying member of the military-indus-
trial complex."

That hasn't won him admirers among an-
tinuclear activists. Warren Davis, a founder
of High Technology Professionals for Peace
in Cambridge, Mass., calls Mr. O'Keefe
"amoral" and charges that "greed" is be-
hind his willingness to work on weapons he
opposes. Mr. O'Keefe counters that he
doesn't make defense policy and, besides,
"when the budget comes through, you take
off your citizen hat and fight for as much of
that budget as possible."

And Mr. O'Keefe wins plenty. The son of
a Providence, R.I., politician, Mr. O'Keefe
says he grew up "not knowing a Republican
or a Protestant," but now he boasts of his
contacts in both political parties.

President Carter offered to make him the

Right now, Mr. [redacted] is willing to spin the right company. But he concedes that [redacted] has been hunting for such a company—one in an insulated market—for about eight years. One that got away: an outfit that raises laboratory mice.

Government Business

For all its commercial enterprises, though, EG&G's fastest-growing business is in government contracts. Since President Reagan took office and began beefing up the nation's defense and research-and-development budgets, EG&G's pretax operating profit from government contracts has doubled. Last year, EG&G helped persuade the Department of Energy to increase fees about 40% for managing the Nevada Test Site and a nuclear-power program in Idaho. It also added the Kennedy Space Center to the portfolio of huge projects that it runs for the government. EG&G engineers test components used in the Space Shuttle before it is launched, load it with fuel and manage the base during missions.

EG&G doesn't win all the contracts for

which it competes, of course. For instance, weapons and research facilities in Oak Ridge, Tenn.

The sprawling Nevada Test Site, in the rocky desert 65 miles north of Las Vegas, remains the heart of the company. EG&G honed its management skills here and has kept current with nuclear technology through its weapons work. Now it employs about 7,000 workers in Nevada—about one-third of its world-wide force—in tasks as demanding as measuring the radioactive particles released by nuclear explosions and as mundane as operating cafeterias.

Scarred Desert

The desert here bears the scars of the weapons program. Hundreds of craters, one the size of a vast rock quarry, mark the sites of underground nuclear tests, which are proceeding now at a clip of about 15 a year. Two homes sit alone on flatland dotted with desert shrubs, all that remain of a model village flattened by a bomb.

Last week, a federal district judge ruled that fallout from atmospheric tests caused nine cancer deaths in areas near the Nevada Test Site and held the government guilty of negligence. EG&G wasn't a defendant in that case, but its Reynolds Electrical & Engineering subsidiary is a defendant in several other cases brought by former test-site workers who contend that they contracted cancer as a result of the blasts. EG&G didn't own Reynolds at the time of the above-ground testing and says the government would indemnify it for any judgment.

In the early years of the nuclear program, when EG&G ran atmospheric tests, hikers would climb into the nearby mountains to watch explosions that turned the night sky into day. But today's underground blasts lack that drama. The ground rumbles then collapses. Occasionally, a coyote wanders too close to be upended.

Deep in Politics

The work in Nevada is subject to politics. All three Democratic candidates for the presidency favor a treaty to ban nuclear testing, but the prospect of a halt doesn't appear to trouble EG&G. During the last nuclear moratorium in 1958, the government employed EG&G to help develop a nuclear-powered rocket, Mr. O'Keefe recalls. To stay current with nuclear technology, the government, he figures, would have to find work for EG&G during any future test ban, too. One possibility: testing nuclear weapons through computer simulations and other means.

Not all of EG&G's Nevada efforts go into detonating weapons. About 150 people are part of the Department of Energy's elite Nuclear Emergency Search Team, which responds to extortion threats involving nuclear weapons. When a Long Beach, Calif., oil company received a \$100,000 extortion demand—backed up by the threat of a nuclear explosion—EG&G searched the area for signs of radioactivity and helped determine that it was a hoax.

The [redacted] team operates 10 air- [redacted] radiation from over [redacted]. And to survey an area on foot, EG&G uses cameras hidden in Marlboro cartons and radiation detectors bundled in backpacks. "We've gotten away from attache cases because our employees don't look like they carry them," notes Peter H. Zavattaro, who heads EG&G's energy measurement operations.

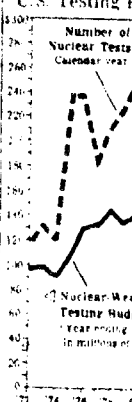
Work Elsewhere

Other EG&G government work is spread throughout the country. Outside Washington, D.C., EG&G scientists devise sonar recording techniques to locate enemy submarines and develop radar systems to detect low-flying missiles. In Albuquerque, N.M., EG&G technicians drive tanks and airplanes under an antenna net that produces an electromagnetic pulse of energy similar to a nuclear bomb to see how they function afterwards.

And in Idaho, on a vast tract of federal land traversed by antelope, EG&G operates six experimental reactors for the government. To gauge the radioactivity released in a meltdown, EG&G intends to heat the fuel cores in two reactors to a point where their metal shieldings burn. Information from these tests will then be used to evaluate reactor-safety features.

EG&G executives talk of a host of next-generation projects: a nuclear-power plant with sophisticated safety features, a furnace that melts low-level radioactive waste into ingots, an underground repository for spent fuel cores. "My fundamental philosophy is that nuclear won't go away," Mr. O'Keefe says. As long as it doesn't, EG&G should prosper.

EG&G: A Nuclear-Weapons Giant

	1993	1992	Change	U.S. Testing Program
Sales (in millions)	\$94.2	\$68.9	+12	
Net Income (in millions)	\$40.6	\$39.9	+1	
Earnings per Share	\$1.36	\$1.36	+15	
Total Assets (in millions)	\$239.2	\$274.7	+23	
Shareholders' Equity (in millions)	\$215.2	\$170.7	+22	
Employees	20,900	18,000		
Stock Price	May 15, 1994: \$20.45 per share May 15, 1993: \$20.12 per share			
First Quarter April:	1994	1993	Change	
Sales (in millions)	\$24.5	\$20.1	+19	
Net Income (in millions)	\$12.7	\$10.6	+10	
Earnings per Share	\$1.32	\$0.95	+12	